

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Helen HOLDER et al.

Application No.: 09/941,268

Filing Date: August 29, 2001

Title: RETROFITTABLE POWER SUPPLY

Confirmation No.:

Examiner: J. Gonzalez

Group Art Unit: 2884

COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- ( ) Response/Amendment ( ) Petition to extend time to respond  
( ) New fee as calculated below ( ) Supplemental Declaration  
(X) No additional fee (Address envelope to "Box Non-Fee Amendments")  
(X) Other: Request For Reconsideration After Final Rejection (fee \$ )

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS	13	MINUS	20	= 0	X \$18	\$ 0
INDEP. CLAIMS	2	MINUS	3	= 0	X \$84	\$ 0
[ ] FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ \$280	\$ 0
EXTENSION FEE	1ST MONTH \$110.00	2ND MONTH \$400.00	3RD MONTH \$920.00	4TH MONTH \$1440.00		\$ 0
OTHER FEES						\$
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 0

Charge \$ 0 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit:

Typed Name:

Signature: \_\_\_\_\_

Respectfully submitted,

Helen HOLDER et al.

By

John K. Harrop

Attorney/Agent for Applicant(s)  
Reg. No. 41,817

Date: July 29, 2002

Appl. No. 09/941,268

*#8/Reg. for Recon.  
Hawkins  
PATENT 8/6/02*

Attorney Docket No. 10016648-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Helen HOLDER et al.

Serial No.: 09/941,268

Examiner: J. Gonzalez

Filed: August 29, 2001

Art Unit: 2834

For: RETROFITTABLE POWER SUPPLY

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**Box Non-Fee Amendment**  
Commissioner for Patents  
Washington, D.C. 20231

**REQUEST FOR RECONSIDERATION AFTER FINAL REJECTION**

Sir:

In response to the May 28, 2002 Final Office Action, Applicants respectfully request reconsideration of the above-identified application. Claims 1-13 are pending.

**I. THE FINALITY OF THE OFFICE ACTION IS PREMATURE**

On page 9, the Office Action states that the Applicants' amendment necessitated a new grounds for rejection, and accordingly, the Office Action is final. The Applicants respectfully assert that a Final Office Action is premature and request the finality be withdrawn.

During a March 13, 2002 personal interview, Applicants' representative discussed with Examiners Ponomarenko and Gonzalez the nature of the claimed invention. In particular, Applicants' representative indicated that a novel and non-obvious feature of at least the independent claims included a housing for a wireless power supply where the housing has a form factor equal to that of a wired power supply device. Applicants' representative explained what a form factor was and how incorporation of a wireless power supply having a form factor equal to that of a wired power supply is both novel and non-obvious. At the Examiners' suggestion, Applicants' representative agreed to amend the independent claims to indicate that the power generation module was both self-contained and non-renewable. This amendment was suggested by the Examiners to distinguish the claimed invention from a typical rechargeable power supply found in a

laptop, or notebook computer. Applicants' representative agreed to this amendment as a means for advancing prosecution, and did not expect the Examiners to subsequently assert that the amendment added new issues requiring a further search. At no time did the Examiners indicate or state that such an amendment would require further search, and had they done so, Applicants' representative would not have made the amendment.

Furthermore, as admitted by Examiner Ponomarenko, this application, which relates to power supplies for portable computers, should not have been examined by art unit 2834, which encompasses large turbo machinery and power generation devices such as gas generators, and steam turbines. However, Examiner Ponomarenko stated that because the examination had already commenced in art unit 2834, the application would remain with art unit 2834. Because the application is in an incorrect art unit, Applicants should not be penalized by the Examiners' possible and understandable lack of expertise in personal computer power supplies.

In addition, the MPEP states, in § 706.07, that:

Before final rejection is in order a clear issue should be developed between the examiner and applicant. To bring the prosecution to as speedy conclusion as possible . . . the invention as claimed and disclosed should be thoroughly searched in the first action and the references fully applied; and in reply to this action the applicant should amend with a view to avoiding all grounds of rejection and objection.

The examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing . . .

Since the amendments to independent claims 1 and 6 were made solely at the behest of the Examiners, and because of the Examiners' possible lack of expertise in the claimed subject matter, Applicants respectfully suggest that a final Office Action does not comport with the specific guidance stated in, and underlying public policies issues implicated by, MPEP § 706.07. For these reasons, Applicants respectfully request that the finality of the Office Action be withdrawn.

## II. FORMAL MATTERS

On page 2, the Office Action objects to the drawings for allegedly failing to show every feature of the invention specified in the claims. The Office Action specifically states that the heat generating source driving a prime mover recited in claim 3, the solar cell recited in claim 4, the wind turbine recited in claim 5, and the flywheel apparatus recited in claim 13 must be shown, or the features canceled from the claims.

Applicants respectfully assert that the drawings provided with the originally filed application show all the features that are claimed and that neither further amendment to

the drawings or cancellation of the features from the claims is required. In particular, Applicants call the Examiners' attention to the specific wording of 37 C.F.R. § 1.83(a), which states that:

[T]he drawings in a non-provisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawings in the form of a graphical drawing symbol or label representation (e.g., a label rectangular box).

Taking, for example, the heat generating source driving a prime mover recited in claim 3, Applicants note that micromachinery is commonly used in spacecraft applications. Such micromachinery includes heat generating sources and prime movers. The prime mover can be a small scale turbine. Such micromachinery is described, for example, in U.S. Patent 6,392,313. The heat generating source in this particular application, as discussed in the specification at least at page 4, line 4, may be a radioactive material capable of generating heat. As one of ordinary skill in the art would know, the heat generated by the radioactive material (e.g., plutonium 239), may be used to heat a working fluid, such as water, which in turn is converted to steam to drive the prime mover. The prime mover then turns a generator which generates electrical power, which may be AC power or DC power, depending on the configuration of the generator. The use of a heat generating source and prime mover as described above, is well known in the art, and is the subject of numerous issued U.S. patents.

A common and well-known example of a solar cell used for generation of DC electrical power from sunlight is the photovoltaic (PV) cell, which has been used in space missions and other applications since the 1960s. One particular use for PV cells is battery charging for sailboats and small motor craft.

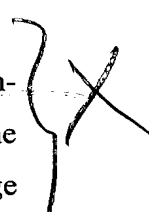
Similarly, wind turbines and flywheel devices are common features for generating or storing electrical energy. Because heat generating sources driving prime movers, solar cells, wind turbines and flywheel devices are well known, and because their illustration is not essential for a proper understanding of the claimed invention, their detailed structure need not be shown in the drawings, as allowed by 37 C.F.R. § 1.83(a). Accordingly, Applicants respectfully request withdrawal of the rejection of the drawings noted on page 2 of the Office Action.

Applicants also note that the Office Action summary states that the proposed drawing correction filed on March 14, 2002 was disapproved by the Examiner.

Applicants point out that the drawing corrections submitted on March 14, 2002 merely added the descriptive term "prior art" to two of the drawing figures. Applicants respectfully request the Examiners to explain why such a change to the drawings is disapproved.

On page 2, the Office Action rejects claims 1-13 under 35 U.S.C. § 112, first paragraph. On page 3, the Office Action elaborates the rejection with respect to claim 1, stating that "claim 1 discloses a self-contained, non-renewable power generation module, yet in the remarks filed on 3/17/02 [sic] the flywheel is disclosed to be used as a storage energy source when the power generation module does not provide sufficient power." The Office Action then asks a series of questions related to the function of the power generation and the flywheel.

As Applicants' representative explained during the March 13, 2002 personal interview, the power generation module is self-contained in that it does not rely on any external source for generating electrical power. That is, the power generation module contains within its housing the components required to generate electrical power. Furthermore, the power generation module is non-renewable, in the sense that the power generation module is replaced, or in the case when the power generation module is a fuel cell, optionally refueled, after removing the power generation module from the device for which it is providing electrical power. This is in contrast to recharging a rechargeable battery. Also, as discussed during the personal interview, and is clearly explained in the specification, the flywheel performs functions similar to that of a storage battery in that the flywheel stores electrical power generated by the power generation module and may provide this electrical power at periods of time when the power generation module, for whatever reason, is incapable of providing power at the requisite level for the device to which the power generation module is coupled.

Furthermore, as noted above, the use of the terms "self-contained" and "non-renewable" were agreed to at the March 13, 2002 personal interview to differentiate the claimed invention from other sources of electrical power, such as rechargeable storage batteries. Clearly, the power generation module is not "a perpetual source of energy" as questioned in the Office Action on page 3. 

Also, on page 3, the Office Action questions how several claim means for producing electrical power, specifically the solar cell, wind turbine, and flywheel, are incorporated into the invention. The Office Action states that solar cells, wind turbines

and flywheels are different types of sources of energy and would require a power supply to have modifications.

As noted above with respect to the objection to the drawings, use of solar cells, wind turbines, and flywheels are well known in the art and a detailed description of the structure of these devices, and a corresponding description of their incorporation into the power supply, is not necessary for the claimed invention. Applicants remind the Examiners that the claimed invention, particularly the invention recited in claim 1, is a wireless power supply having a housing with a form factor equal to that of a wired power supply. The specific features of the solar cell, flywheel, and wind turbine are not recited in claim 1, but instead are recited in claims that depend from claim 1 or other independent claims. Furthermore, the flywheel is not recited as a device for generating electricity, but rather as a device for storing electricity, and is therefore not the "DC power generator" recited in claim 1.

On page 4, the Office Action asserts that a DC power generator (a DC power generator is recited in claim 1) functions differently from the disclosed sources of energy in claims 2-4 (fuel cell, heat generating source, and solar cells). The Office Action then asks if the cells and heat source are part of the DC power generator or if the cells and the heat source are the DC generator.

As clearly stated in the specification, the DC generator can take one of many forms. In an exemplary embodiment, the DC power generator is a fuel cell. However, other devices can be used to generate DC power, including a heat source driving a prime mover, solar cells, and wind turbines. Thus, the fuel cell, heat generating source driving a prime mover, solar cells, and wind turbine are all examples, or embodiments, of a DC power generator. Apparently, the Examiners are taking a very narrow view of the definition of DC power generator as a rotating electrical device that produces DC power based on rotation of a coil in a magnetic field. While such a device may be required to be a component of some DC power generators, the term "DC power generator," as used in claim 1 encompasses more than just the rotating DC power generator, and includes the prime mover, or driving device in the case of a heat generating source with a prime mover. In the case of a fuel cell, or solar cell, the DC power generators are the fuel cells and solar cells themselves.

Applicants again remind the Examiners that Applicants' representative explained the features of the devices recited in claim 2-5 to the Examiners during the March 13, 2002 personal interview. Applicants assert that any reasonable review of the

specification combined with knowledge of one of ordinary skill in the art would lead to the conclusion that the specification completely supports the subject matter recited in claims 1-13. Withdrawal of the rejection of claims 1-13 under 35 U.S.C. § 112, first paragraph, is therefore respectfully requested.

### III. THE CLAIMS RECITE PATENTABLE SUBJECT MATTER

On page 5, the Office Action rejects claims 1, 6, 7, and 11 under 35 U.S.C. § 103(a) over U.S. Patent 6,307,742 to Diaz et al. (hereafter Diaz) in view of U.S. Patent 6,353,304 to Atcitty (hereafter Atcitty). This rejection is respectfully traversed.

The Office Action asserts that Diaz discloses a power supply device with a housing of a form factor equal to that of a wired power supply and an AC power connection, and that Atcitty discloses a DC generator used in conjunction with a AC source and a DC/AC converter.

Diaz is directed to a personal computer having a readily accessible mother board. To make the mother board readily accessible, all the components, including the power supply, are easily removed from the power containing the mother board. There is nothing in Diaz that discusses a wireless power supply having a form factor equal to that of a wired power supply. In fact, there is nothing in Diaz that discusses use of any kind of wireless power supply for the personal computer.

Atcitty is directed to an electrical system that uses an AC source to charge a series of DC batteries. There is nothing in Atcitty that discloses or suggests a use of a wireless power supply having a form factor equal to that of a wired power supply.

In contrast to the combination of Diaz and Atcitty, independent claims 1 and 6 recite a wireless power supply device having a housing with a form factor equal to that of a wired power supply device. What this means is that an existing wired power supply is removed from the personal computer, and is replaced by a wireless power supply having the same dimensions (hence same form factor) as that of the wired power supply. As noted above, this feature is not disclosed or suggested by Diaz and Atcitty, individually, and in combination. Accordingly, independent claims 1 and 6 are patentable. Claims 7 and 11 depend from claim 6, and for this reason and the additional features they recite, claims 7 and 11 are also patentable. Withdrawal of the rejection of claims 1, 6, 7, and 11 under 35 U.S.C. § 103(a) is respectfully requested.

On page 6, the Office Action rejects claims 2 and 12 under 35 U.S.C. § 103(a) over Diaz and Atcitty and further in view of U.S. Patent 5,654,113 to Vaidyanathan et al. (hereafter Vaidyanathan). This rejection is respectfully traversed.

Diaz and Atcitty have been described above. Vaidyanathan is directed to a rechargeable electrochemical battery having a solid organic electrode and a thin film cathode and anode. This is clearly not a proton exchange module fuel cell.

Claim 2 recites the DC power generator comprising a proton exchange module fuel cell. As noted above, Vaidyanathan is directed to a rechargeable electrochemical battery, and not a proton exchange module fuel cell. Accordingly, Diaz, Atcitty, and Vaidyanathan do not disclose or suggest all the features recited in dependent claim 2. Therefore, claim 2 is patentable. Claim 12 depends from patentable claim 6, and for this reason and the additional feature it recites, claim 12 is also patentable. Withdrawal of the rejection of claims 2 and 12 under 35 U.S.C. § 103(a) is respectfully requested.

On page 7, the Office Action rejects claims 3 and 8 under 35 U.S.C. § 103(a) over Diaz and Atcitty in view of U.S. Patent 5,693,201 to Hsu et al. (hereafter Hsu). This rejection is respectfully traversed.

Claim 3 depends from patentable claim 1 and claim 8 depends from patentable claim 6. For this reason and the additional features they recite, claims 3 and 8 are also patentable. Withdrawal of the rejection of claims 3 and 8 under 35 U.S.C. § 103(a) is respectfully requested. ✓

On page 7, the Office Action rejects claims 4, 5, 9, 10, and 13 under 35 U.S.C. § 103(a) over Diaz and Atcitty, and further in view of one of ordinary skill in the art. This rejection is respectfully traversed. ✓

Claims 4 and 5 depend from patentable claim 1, and claims 9, 10, and 13 depend from patentable claim 6. For this reason and the additional features they recite, claims 4, 5, 9, 10, and 13 are also patentable. Withdrawal of the rejection of claims 4, 5, 9, 10, and 13 under 35 U.S.C. § 103(a) is respectfully requested. ✓



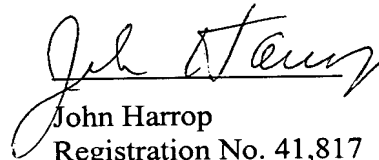
#### IV. CONCLUSION

For at least the reasons noted above, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-13 are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants undersigned representative at the telephone number listed below.

Respectfully submitted,

Dated: July 29, 2002



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